

**APPLICATION**

**FOR UNITED STATES LETTERS PATENT**

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**SPECIFICATION**

TO ALL WHOM IT MAY CONCERN:

BE IT KNOWN THAT I, **Charles D. Black**, a citizen of the United States, have  
invented a new and useful material dispenser system of which the following is a  
specification:

1  
2  
3 **Material Dispenser System**  
4  
5

6 **CROSS REFERENCE TO RELATED APPLICATIONS**  
7

8 I hereby claim benefit under Title 35, United States Code, Section 119(e) of  
9 United States provisional patent application Serial Number 60/432,437 filed  
10 December 10, 2002. The 60/432,437 application is currently pending. The  
11 60/432,437 application is hereby incorporated by reference into this application.  
12  
13

14 **STATEMENT REGARDING FEDERALLY**  
15 **SPONSORED RESEARCH OR DEVELOPMENT**  
16

17 Not applicable to this application.  
18  
19

20 **BACKGROUND OF THE INVENTION**  
21  
22  
23

24 **Field of the Invention**  
25

26 The present invention relates generally to elongate material dispensers and more  
27 specifically it relates to a material dispenser system for efficiently dispensing elongate  
28 material and providing an automatic system for preventing accidental dispensing of  
29 elongate material.  
30  
31

## **Description of the Related Art**

Elongate material dispensers have been in use for years and dispense various types of elongate material such as barricade tape, string and the like. Conventional elongate material dispensers may be comprised of rotating reels. Conventional elongate material dispensers typically allow the user to secure the loose end of the elongate material after dispensing to prevent accidental dispensing of the elongate material.

One problem with conventional elongate material dispensers is that they do not provide an automatic system for preventing accidental dispensing of the elongate material. Another problem with conventional elongate material dispensers is that they are not capable of being easily adjusted to frictionally dispense the elongate material. Another problem with conventional elongate material dispensers is that they are relatively expensive to manufacture. A further problem with conventional elongate material dispensers is that they can be time consuming to load and reload the elongate material.

While these devices may be suitable for the particular purpose to which they address, they are not as suitable for efficiently dispensing elongate material. Conventional elongate material dispensers do not adequately prevent the accidental dispensing of elongate material.

In these respects, the material dispenser system according to the present invention substantially departs from the conventional concepts and designs of the prior art, and in so doing provides an apparatus primarily developed for the purpose of efficiently dispensing elongate material.

1

2                   **BRIEF SUMMARY OF THE INVENTION**

3

4           In view of the foregoing disadvantages inherent in the known types of elongate  
5 material dispensers now present in the prior art, the present invention provides a new  
6 material dispenser system construction wherein the same can be utilized for efficiently  
7 dispensing elongate material.

8

9           The general purpose of the present invention, which will be described  
10 subsequently in greater detail, is to provide a new material dispenser system that has  
11 many of the advantages of the elongate material dispensers mentioned heretofore and  
12 many novel features that result in a new material dispenser system which is not  
13 anticipated, rendered obvious, suggested, or even implied by any of the prior art  
14 elongate material dispensers, either alone or in any combination thereof.

15

16           To attain this, the present invention generally comprises a first prong and a  
17 second prong resiliently connected by a base in a substantially U-shaped structure.  
18 The prongs each have a shoulder and a jaw that receive a spool between thereof. To  
19 load a spool, the user compresses the handles of the prongs thereby allowing insertion  
20 of the distal portions of the prongs through the core of the spool. To dispense material  
21 from the spool, the user compresses the handles of the prongs thereby allowing free  
22 rotation of the spool upon the prongs. If the user desires tension within the elongate  
23 material being dispenses, the handles are allowed to expand slightly so that the prongs  
24 frictionally engage the core of the spool. When it is desired not to have elongate  
25 material dispensed, the user allows the prongs to expand outwardly thereby frictionally  
26 engaging the core of the spool to prevent rotation of the spool.

27

28           There has thus been outlined, rather broadly, the more important features of the  
29 invention in order that the detailed description thereof may be better understood, and

1 in order that the present contribution to the art may be better appreciated. There are  
2 additional features of the invention that will be described hereinafter and that will form  
3 the subject matter of the claims appended hereto.

4  
5 In this respect, before explaining at least one embodiment of the invention in  
6 detail, it is to be understood that the invention is not limited in its application to the  
7 details of construction and to the arrangements of the components set forth in the  
8 following description or illustrated in the drawings. The invention is capable of other  
9 embodiments and of being practiced and carried out in various ways. Also, it is to be  
10 understood that the phraseology and terminology employed herein are for the purpose  
11 of the description and should not be regarded as limiting.

12  
13 A primary object of the present invention is to provide a material dispenser  
14 system that will overcome the shortcomings of the prior art devices.

15  
16 A second object is to provide a material dispenser system for efficiently  
17 dispensing elongate material.

18  
19 Another object is to provide a material dispenser system that provides an  
20 automatic system for preventing accidental dispensing of elongate material.

21  
22 An additional object is to provide a material dispenser system that is capable of  
23 dispensing various types of elongate material such as tape, string and the like.

24  
25 A further object is to provide a material dispenser system that has no rotating  
26 components.

1 Another object is to provide a material dispenser system that allows for a user  
2 to maintain a desired level of tension upon the elongate material to prevent excess  
3 material from unwinding.

4  
5 A further object is to provide a material dispenser system that allows for  
6 efficient loading and reloading of elongate material.

7  
8 Other objects and advantages of the present invention will become obvious to the  
9 reader and it is intended that these objects and advantages are within the scope of the  
10 present invention.

11  
12 To the accomplishment of the above and related objects, this invention may be  
13 embodied in the form illustrated in the accompanying drawings, attention being called  
14 to the fact, however, that the drawings are illustrative only, and that changes may be  
15 made in the specific construction illustrated and described within the scope of the  
16 appended claims.

1  
2                   **BRIEF DESCRIPTION OF THE DRAWINGS**  
3

4           Various other objects, features and attendant advantages of the present  
5 invention will become fully appreciated as the same becomes better understood when  
6 considered in conjunction with the accompanying drawings, in which like reference  
7 characters designate the same or similar parts throughout the several views, and  
8 wherein:  
9

10           FIG. 1 is an upper perspective view of the present invention.  
11

12           FIG. 2 is a front view of the present invention in a fully expanded state.  
13

14           FIG. 3 is a front view of the present invention in a compressed state.  
15

16           FIG. 4 is a side view of the present invention.  
17

18           FIG. 5a is an upper perspective view of the present invention with a single  
19 spool positioned about the prongs.  
20

21           FIG. 5b is an upper perspective view of the present invention with two spools  
22 positioned about the prongs.  
23

24           FIG. 6 is an upper perspective view of the present invention being utilized to  
25 dispense tape from a spool.  
26

27           FIG. 7 is an end view of the present invention.  
28

29           FIG. 8 is a cross sectional view taken along line 8-8 of Figure 7.

FIG. 9 is the cross sectional view of Figure 8 with the prongs compressed to allow for rotation or removal of the spool.

FIG. 10 is a side cut away view of the present invention illustrating the loading or removal of a spool.

FIG. 11 is an upper perspective view of a first alternative embodiment.

FIG. 12 is an upper perspective view of a second alternative embodiment of the present invention.



## DETAILED DESCRIPTION OF THE INVENTION

### *A. Overview*

Turning now descriptively to the drawings, in which similar reference characters denote similar elements throughout the several views, FIGS. 1 through 12 illustrate a material dispenser system 10, which comprises a first prong 20 and a second prong 30 resiliently connected by a base 50 in a substantially U-shaped structure. The prongs 20, 30 each have a shoulder and a jaw that receive a spool 12 between thereof. To load a spool 12, the user compresses the handles 28, 38 of the prongs 20, 30 thereby allowing insertion of the distal portions of the prongs 20, 30 through the core 14 of the spool 12. To dispense material from the spool 12, the user compresses the handles 28, 38 of the prongs 20, 30 thereby allowing free rotation of the spool 12 upon the prongs 20, 30. If the user desires tension within the elongate material being dispenses, the handles 28, 38 are allowed to expand slightly so that the prongs 20, 30 frictionally engage the core 14 of the spool 12. When it is desired not to have elongate material dispensed, the user allows the prongs 20, 30 to expand outwardly thereby frictionally engaging the core 14 of the spool 12 to prevent rotation of the spool 12.

### *B. First Prong*

Figures 1 through 3 best illustrate the first prong 20 which has an elongate structure. The first prong 20 preferably includes a first jaw 22, a first shoulder 26, a first body 24 and a first handle 28 as best shown in Figures 2 and 3 of the drawings. The first body 24 extends between the first jaw 22 and the first shoulder 26 as further shown in Figures 2 and 3 of the drawings. A first handle 28 extends from the first shoulder 26 opposite of the first body 24. The first prong 20 is preferably constructed of a resilient material such as but not limited to plastic.

1       The first jaw **22** preferably extends transversely from the first prong **20** as  
2 shown in Figures 2 and 3 of the drawings. The first jaw **22** preferably has a syncline  
3 shaped structure, however various other structures may be utilized for the first jaw **22**.  
4 The first jaw **22** retains the spool **12** upon the first body **24** as shown in Figure 5a of  
5 the drawings.

6  
7       The first shoulder **26** extends from the first prong **20** as shown in Figures 2 and  
8 3 of the drawings. The shoulder may have various shapes and structures capable of  
9 retaining the spool **12** upon the first body **24** as shown in Figures 8 and 9 of the  
10 drawings. The first shoulder **26** preferably includes a first slot **27** that is capable of  
11 receiving a distal portion of the elongate material in a frictional manner when the  
12 present invention is not in use.

13  
14       The first body **24** extends between the first jaw **22** and the first shoulder **26** as  
15 shown in Figures 2 and 3 of the drawings. The outer portion of the first body **24** is  
16 formed to rotatably and frictionally engage a core **14** of a spool **12**. The first body **24**  
17 may have a tapered structure as further shown in Figures 2 and 3 of the drawings.

18  
19       Figure 8 illustrates the outer portion of the first body **24** being positioned  
20 substantially parallel to an inner surface of a core **14** when the first prong **20** is  
21 expanded. Figure 9 illustrates the outer portion of the first body **24** positioned a  
22 distance away from the inner surface of the core **14** when the first prong **20** is  
23 compressed inwardly thereby allowing the spool **12** to rotate about the prongs **20**, **30**.

24  
25       The first handle **28** extends from the first shoulder **26** and is formed to be  
26 grasped by a user's hand. The first handle **28** may have gripping members **40** to assist  
27 in the gripping of the first handle **28** as shown in Figures 2 and 3 of the drawings. As  
28 shown in Figures 2 and 3 of the drawings, the first handle **28** may be positioned at an  
29 angle with respect to the main body.

1  
2 **C. Second Prong**

3       Figures 1 though 3 best illustrate the second prong 30 which has an elongate  
4 structure. The second prong 30 preferably has a structure that mirrors the first prong  
5 20 as best illustrated in Figures 2 and 3 of the drawings.  
6

7       The second prong 30 preferably includes a second jaw 32, a second shoulder  
8 36, a second body 34 and a second handle 38 as best shown in Figures 2 and 3 of the  
9 drawings. The second body 34 extends between the second jaw 32 and the second  
10 shoulder 36 as further shown in Figures 2 and 3 of the drawings. A second handle 38  
11 extends from the second shoulder 36 opposite of the second body 34. The second  
12 prong 30 is preferably constructed of a resilient material such as but not limited to  
13 plastic.  
14

15       The second jaw 32 preferably extends transversely from the second prong 30 as  
16 shown in Figures 2 and 3 of the drawings. The second jaw 32 preferably has a  
17 syncline shaped structure, however various other structures may be utilized for the  
18 second jaw 32. The second jaw 32 retains the spool 12 upon the second body 34 as  
19 shown in Figure 5a of the drawings.  
20

21       The second shoulder 36 extends from the second prong 30 as shown in Figures  
22 2 and 3 of the drawings. The shoulder may have various shapes and structures capable  
23 of retaining the spool 12 upon the second body 34 as shown in Figures 8 and 9 of the  
24 drawings. The second shoulder 36 preferably includes a second slot 37 that is capable  
25 of receiving a distal portion of the elongate material in a frictional manner when the  
26 present invention is not in use.  
27

28       The second body 34 extends between the second jaw 32 and the second  
29 shoulder 36 as shown in Figures 2 and 3 of the drawings. The outer portion of the

1 second body 34 is formed to rotatably and frictionally engage a core 14 of a spool 12.  
2 The second body 34 may have a tapered structure as further shown in Figures 2 and 3  
3 of the drawings.  
4

5 Figure 8 illustrates the outer portion of the second body 34 being positioned  
6 substantially parallel to an inner surface of a core 14 when the second prong 30 is  
7 expanded. Figure 9 illustrates the outer portion of the second body 34 positioned a  
8 distance away from the inner surface of the core 14 when the second prong 30 is  
9 compressed inwardly thereby allowing the spool 12 to rotate about the prongs 20, 30.  
10

11 The second handle 38 extends from the second shoulder 36 and is formed to be  
12 grasped by a user's hand. The second handle 38 may have gripping members 40 to  
13 assist in the gripping of the second handle 38 as shown in Figures 2 and 3 of the  
14 drawings. As shown in Figures 2 and 3 of the drawings, the second handle 38 may be  
15 positioned at an angle with respect to the main body.  
16

17 The first prong 20 and the second prong 30 are connected together opposite of  
18 the first jaw 22 and the second jaw 32 forming a space between thereof as shown in  
19 Figures 1 through 3 of the drawings. The distal ends of the first handle 28 and the  
20 second handle 38 are preferably connected to a base 50 or similar structure thereby  
21 forming a U-shaped structure with the prongs 20, 30 preferably in a substantially  
22 parallel position to one another. The base 50 preferably is constructed of a resilient  
23 material such as but not limited to plastic. The base 50 may have an opening 52 for  
24 allowing attachment to various objects as shown in Figures 1 through 3 of the  
25 drawings.  
26

1     **D.     *Alternative Embodiments***

2             Figures 11 and 12 illustrate two potential alternative embodiments of the  
3     present invention. It can be appreciated that various other variations may be made to  
4     the present invention within the spirit and scope of the present invention.

5  
6             Figure 11 illustrates a first alternative embodiment wherein the first body 24  
7     and the second body 34 are connected to one another by an end portion 60. The spool  
8     12 is loaded/unloaded over the jaws 22, 32 wherein the jaws 22, 32 have a tapered  
9     back structure and are resilient for allowing the core 14 of the spool 12 to pass over.  
10    Once the spool 12 has passed over the jaws 22, 32, the jaws 22, 32 prevent the spool  
11    12 from passing outwardly from the present invention.

12  
13            Figure 12 illustrates a second alternative embodiment of the present invention  
14    wherein the spool 12 is loaded/removed about the end of the handles 28, 38 instead of  
15    the end of the first body 24 and the second body 34. The first shoulder 26 and the  
16    second shoulder 36 have a smaller structure than in the preferred embodiment as  
17    shown in Figure 12 to allow for the spool 12 to be passed over the shoulders 26, 36 during  
18    loading/unloading of the spool 12. The first slot 27 and the second slot 37 are preferably  
19    positioned within the first jaw 22 and the second jaw 32 respectively within the second  
20    alternative embodiment of the invention as shown in Figure 12.

21  
22     **E.     *Operation of Invention – Loading/Unloading Spools***

23            To load a spool 12 onto the present invention, the user first grasps the handles  
24    28, 38 and compresses the handles 28, 38 towards one another. The prongs 20, 30  
25    thereby taper inwardly towards one another as shown in Figure 3 of the drawings. This  
26    allows for the spool 12 to be slid over the prongs 20, 30 as shown in Figure 10 of the  
27    drawings. When the spool 12 is being slid over the prongs 20, 30, the inner surface of  
28    the core 14 of the spool 12 will engage the jaws 22, 32 thereby further compressing the  
29    distal portions of the prongs 20, 30 to allow passage of the spool 12. After the jaws

1 22, 32 extend through the opposing end of the core 14, the jaws 22, 32 expand thereby  
2 retaining the spool 12 positioned upon the first body 24 and the second body 34 of the  
3 prongs 20, 30 between the respect shoulders 26, 36.

4  
5 After the spool 12 is properly positioned about the first body 24 and the second  
6 body 34 between the jaws 22, 32 and the shoulders 26, 36, the user then releases the  
7 handles 28, 38 to allow for the prongs 20, 30 to expand outwardly as shown in Figure  
8 8 of the drawings. With the prongs 20, 30 extended outwardly as shown in Figures 5a,  
9 8 and 9 of the drawings.

10  
11 With the prongs 20, 30 extended outwardly, the first body 24 and the second  
12 body 34 frictionally engage the inner surface of the core 14 to prevent rotation of the  
13 spool 12. In addition, the user preferably attaches the distal end of the elongate  
14 material within either the first slot 27 or the second slot 37 to prevent accidental  
15 dispensing.

16  
17 To unload a used spool 12 from the present invention, the user simply  
18 compresses the handles 28, 38 together and then removes the spool 12 by passing the  
19 spool 12 over the jaws 22, 32 of the prongs 20, 30.

#### 20 21 ***F. Operation of Invention – Dispensing Elongate Material***

22 To dispense the elongate material from the spool 12, the user preferably first  
23 removes the distal portion of the elongate material from one of the slots 27, 37 and  
24 then attaches the distal portion of the elongate material to an object as shown in Figure  
25 6 of the drawings.

26  
27 The user then compresses the handles 28, 38 of the prongs 20, 30 as shown in  
28 Figures 6 and 9 of the drawings thereby reducing the friction between the prongs 20,  
29 30 and the inner surface of the core 14. The user then is able to walk away from the

1 object the elongate material is attached to and dispense the elongate material as shown  
2 in Figure 6 of the drawings.

3  
4 If the user desires tension within the elongate material being dispensed to  
5 prevent over-dispensing the elongate material, the user simply relaxes their grip upon  
6 the handles 28, 38 thereby allowing the prongs 20, 30 to frictionally engage the core 14  
7 at a level that allows rotation of the spool 12 but with a desired level of friction to  
8 prevent free rotation of the spool 12.

9  
10 ***G. Operation of Invention – Terminating Dispensing Elongate Material***

11 To terminate dispensing of the elongate material from the spool 12, the user  
12 relaxes their grip upon the handles 28, 38 thereby allowing the prongs 20, 30 to expand  
13 outwardly as shown in Figure 8 of the drawings. The prongs 20, 30 expand outwardly  
14 until the core 14 of the spool 12 prevents further expansion thereof. The prongs 20, 30  
15 thereby frictionally engage the core 14 of the spool 12 to prevent rotation of the spool  
16 12. The user then attaches the distal portion of the elongate material within one of the  
17 slots 27, 37 to prevent accidental unwrapping from the spool 12 as shown in Figure 5a  
18 of the drawings.

19  
20 What has been described and illustrated herein is a preferred embodiment of the  
21 invention along with some of its variations. The terms, descriptions and figures used  
22 herein are set forth by way of illustration only and are not meant as limitations. Those  
23 skilled in the art will recognize that many variations are possible within the spirit and  
24 scope of the invention, which is intended to be defined by the following claims (and  
25 their equivalents) in which all terms are meant in their broadest reasonable sense  
26 unless otherwise indicated. Any headings utilized within the description are for  
27 convenience only and have no legal or limiting effect.